Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Improving Network Resiliency Through	)	PS Docket No. 11-60
Encouraging Coordination with Power	)	
Companies	)	

REPLY COMMENTS OF CTIA

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February 25, 2019

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CTIA submits these reply comments in response to the *Public Notice* issued by the Public Safety and Homeland Security Bureau (Bureau) of the Federal Communications Commission (Commission) regarding improving wireless network resiliency through encouraging coordination with power companies.[1]

I. INTRODUCTION AND SUMMARY.

The initial record in this proceeding demonstrates that wireless providers continue to strengthen and harden networks, improve network resiliency and planning, and enhance coordination through the Wireless Network Resiliency Cooperative Framework and elsewhere, and that these efforts have benefitted consumers who increasingly rely on wireless services during and after natural disasters and emergencies. The record also reveals some of the challenges faced by all types of communications providers and by power companies in the aftermath of the historic hurricanes of 2017 and 2018, including challenges of real-time coordination between various industries. The record confirms that communications providers and power companies actively engage in cooperative efforts to coordinate before, during and after a disaster, and the majority of commenters support additional voluntary efforts to further

[1] *Public Safety and Homeland Security Bureau Seeks Comment on Improving Wireless Network Resiliency Through Encouraging Coordination with Power Companies*, Public Notice, DA 19-13 (rel. Jan. 3, 2019) (*Public Notice*).

this work. In particular, commenters widely support enhancing cooperative efforts at the local level through Emergency Operations Centers (EOCs), as well as through the Commission's Broadband Deployment Advisory Committee (BDAC) Disaster Response and Recovery Working Group and the Department of Homeland Security (DHS) National Coordinating Center for Communications (NCC).

The record also demonstrates that a flexible approach to resiliency has proven effective. Network resiliency has improved and will continue to improve under the voluntary, flexible approach wireless providers and the Commission have utilized to date, including through the Wireless Network Resiliency Cooperative Framework. The Commission can best promote network resiliency and reliability by ensuring that providers have the flexibility to continue to employ techniques that are best suited to address the unique circumstances posed by each event and the unique needs of each community.

Finally, the Commission should continue its efforts to modernize its infrastructure siting policies, which have the benefit of improving network resiliency. The Commission's actions over the past decade, and in the last year in particular, to modernize its infrastructure siting rules to ease regulatory impediments to wireless deployment have enabled more streamlined deployment, allowing increased network densification and greater network capacity – while maintaining a process that ensures safety.

II. THE RECORD REFLECTS RESTORATION EFFORTS WERE CHALLENGING FOR ALL TYPES OF COMMUNICATIONS PROVIDERS AND POWER COMPANIES IN THE AFTERMATH OF RECENT HISTORIC HURRICANES.

As CTIA has previously explained, wireless networks largely withstood unprecedented conditions during the hurricanes of 2017 and 2018, and wireless providers were able to quickly expedite service restoration in the majority of instances where networks were affected. Comments in response to the *Public Notice* confirm, however, that all stakeholders – including

different types of communications providers and power companies – faced common challenges restoring services in the aftermath of recent historic hurricanes in 2017 and 2018.

Service restoration was particularly challenging in the aftermath of Hurricane Michael, which brought sustained winds of 155 miles per hour and inflicted tornado-like damages on communities at ground zero.[2] For example, commenters representing cable providers and wireless providers point to fiber cuts as one significant factor that slowed restoration efforts in the wake of the storm.[3] Many fiber cuts were the direct result of Hurricane Michael's unprecedented conditions, but others were caused by the power companies' crews (or their contractors) accidentally cutting fiber while cleaning debris in order to restore electrical service. In some cases, these cuts occurred *after* a communications provider already had repaired a cut.[4]

Yet, as the record shows, Hurricane Michael devastated electrical networks as well, as power companies faced significant challenges in restoring service. Indeed, five days after Hurricane Michael made landfall, 99 percent of customers in Florida's Gulf County were still without power.[5]

[2] Comments of CTIA, PS Docket No. 18-339, at 3 (filed Dec. 17, 2018).

[3] *See* Comments of American Cable Association, PS Docket No. 11-60, at 12 (filed Feb. 8, 2019) (ACA Comments); Comments of NCTA – The Internet & Television Association, PS Docket No. 11-60, at 2 (filed Feb. 8, 2019) (NCTA Comments); Comments of CTIA, PS Docket No. 11-60, at 7 (filed Feb. 8, 2019) (CTIA Comments); Comments of AT&T, PS Docket No. 11-60, at 5 (filed Feb. 8, 2019) (AT&T Comments); Comments of Verizon, PS Docket No. 11-60, at 2 (filed Feb. 8, 2019) (Verizon Comments). *See also* Comments of Iridium, PS Docket No. 11-60, at 10 (filed Feb. 8, 2019).

[4] *See* NCTA Comments at 2; AT&T Comments at 5.

[5] *See* Florida Public Service Commission, Michael 2018 – Power Outage Data, https://secure.floridapsc.com/Files/PDF/HurricaneReport/Michael_10-11-18_2130.pdf?date= 2/24/2019.

On an even more profound scale, Hurricane Maria devastated the power infrastructure in Puerto Rico, causing a massive blackout on the island that lasted for months.[6] Wireless services were also affected in the aftermath of Hurricane Maria, due to factors that included a lack of electricity and the occurrence of fiber cuts, according to the Puerto Rico Telecommunications Regulatory Board.[7]

These experiences highlight why the wireless industry is more committed than ever to improving coordination with power companies leading up to, during, and in the aftermath of emergencies and disasters.

III. COMMENTERS WIDELY SUPPORT ENHANCING COOPERATIVE EFFORTS, AT THE LOCAL LEVEL AND THROUGH THE BDAC AND DHS, TO IMPROVE COORDINATION BETWEEN POWER COMPANIES AND COMMUNICATIONS PROVIDERS.

The record strongly supports increased coordination between communications providers and power companies to enhance and improve the restoration of services to consumers.[8] To that end, CTIA supports a renewed focus on coordination at the local level through state and local EOCs and cooperative efforts at the national level through DHS and the BDAC.

Commenters of all stripes – including wireless providers and power companies – recognize that on-the-ground coordination through local and state EOCs is a critical component

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[6] Nicole Goodking, *Puerto Rico's Hurricane Maria Power Outage is Now the World's Second Largest Blackout*, NEWSWEEK (Apr. 12, 2018), https://www.newsweek.com/puerto-rico-power-hurricane-maria-blackout-882549.

[7] *See* Reply Comments of CTIA, PS Docket No. 17-344, at 5 (filed Feb. 21, 2018) ("[T]he Puerto Rico [Telecommunications Regulatory Board] and others largely attribute prolonged service outages to issues beyond the control of wireless providers, including lack of electricity, theft of generators, fuel, and copper, and accidental damage done by third-party recovery efforts.").

[8] *See, e.g.*, CTIA Comments at 6; Comments of the Edison Electric Institute, The Gridwise Alliance, The National Rural Electric Cooperative Association And The Utilities Technology Council, PS Docket No. 11-60, at 2 (filed Feb. 8, 2019) (Electric Trade Associations Comments); ACA Comments at 12; Comments Of The Alliance For Telecommunications Industry Solutions, PS Docket No. 11-60, at 4 (filed Feb. 8, 2019) (ATIS Comments).

for enhancing coordination among all parties.[9] For example, AT&T notes that coordination with power utility counterparts occurs primarily at the local level and through interaction with the state and/or local EOCs.[10] And, based on its experience working with EOCs, Verizon observes that local government EOCs can effectively supplement the coordination efforts at the federal and state levels.[11] The Electric Trade Associations likewise state that communications and coordination between communications providers and power companies is designed to occur at state and local EOCs.[12]

Based on the record, there is a widely-shared consensus that all parties would benefit from coordination that is both more extensive and more widespread. The record contains numerous ideas for accomplishing this. For example, T-Mobile notes that service restoration efforts could be significantly improved if companies had "better information regarding the plans and timetables for restoring commercial power."[13] American Cable Association recommends that power companies identify and share points of contact with communications providers in advance of an emergency, and that power companies should further be encouraged to solicit input from communications providers about priorities for restoration.[14] Meanwhile, the Electric Trade Associations suggest that the Commission should encourage communications providers to

[9] AT&T Comments at 4; Electric Trade Associations Comments at 6; Verizon Comments at 7; Comments Of American Electric Power Service Corporation And Southern Company Services, Inc., PS Docket No. 11-60, at 6 (filed Feb. 8, 2019) (AEP and Southern Comments); ATIS Comments at 4; Comments of Competitive Carriers Association, PS Docket No. 11-60, at 6 (filed Feb. 8, 2019) (CCA Comments).

[10] AT&T Comments at 4.

[11] Verizon Comments at 7.

[12] Electric Trade Associations Comments at 6.

[13] Comments of T-Mobile USA, Inc., PS Docket No. 11-60, at 5 (filed Feb. 8, 2019) (T-Mobile Comments).

[14] ACA Comments at 12.

engage early with state and local authorities and critical infrastructure stakeholders.[15] The BDAC's Disaster Response and Recovery Working Group provides the Commission with a valuable forum to examine these and other ideas for enhancing coordination and planning through state and local emergency operations centers.[16]

Commenters also note the effectiveness of information sharing that occurs through the DHS's NCC.[17] As noted in the *Public Notice*, the NCC continuously monitors incidents and events that may impact emergency communications. In cases of emergency, NCC Watch leads emergency communications response and recovery efforts under Emergency Support Function #2 of the National Response Framework.[18] As part of this work, the NCC facilitates the sharing of information, such as the status of power restoration in an affected area, to communications providers in an affected area. Efforts such as these to facilitate information sharing prove valuable before, during, and after a significant event, and the wireless industry encourages continued efforts along these lines.

Greater collaboration between the FCC and other federal partners could also serve to help enhance resiliency and coordination. For example, commenters suggest that the Commission could work with the Federal Energy Regulatory Commission and the U.S. Department of Energy

[15] Electric Trade Associations Comments at 5.

[16] *See* CTIA Comments at 8; ACA Comments at 10-11; Comments of NTCA—The Rural Broadband Association, PS Docket No. 11-60, at 5 (filed Feb. 8, 2019) (NTCA Comments); Comments of the Communications Sector Coordinating Council, PS Docket No. 11-60, at 7 (filed Feb. 8, 2019) (CSCC Comments); Comments of USTelecom – The Broadband Association, PS Docket No 11-60, at 3 (filed Feb. 8, 2019) (USTelecom Comments); Electric Trade Associations Comments at 4-5; Verizon Comments at 7.

[17] *See* AT&T Comments at 6; T-Mobile Comments at 7; CSCC Comments at 4-5; Electric Trade Associations Comments at 7; NTCA Comments at 4-5; USTelecom Comments at 2; Verizon Comments at 6.

[18] *See* Department of Homeland Security, National Cybersecurity and Communications Integration Center, National Coordinating Center for Communications, https://www.dhs.gov/cisa/national-coordinating-center-communications (last visited Feb. 21, 2018).

to emphasize the need for improved resiliency of commercial power provided to carriers.[19] CTIA encourages the Commission to explore the potential benefits of such coordination between policymakers.

Finally, although the majority of commenters favor efforts to enhance coordination between communications providers and power companies, there remain some within the utility community that appear to question such cooperative efforts. For example, two power companies assert that the "most beneficial coordination" is for "coordination among the communications providers themselves," who should designate a single point of contact for coordination with power companies.[20] They go on to add "an electrical utility's primary purpose is not the provision of aerial infrastructure for communications providers."[21] Another power company states that it will participate in efforts to improve response capabilities and information sharing subject to compensation by communications providers to do so.[22] CTIA nevertheless remains hopeful that, through the Commission's efforts here, all stakeholders will embrace the value of working together to enhance coordination between communications providers and power companies.

IV. A FLEXIBLE APPROACH TO RESILIENCY HAS PROVEN EFFECTIVE IN THE FACE OF INCREASINGLY SIGNIFICANT EVENTS, AND CALLS FOR ONE-SIZE-FITS-ALL REGULATIONS SHOULD BE REJECTED.

The record confirms that voluntary arrangements like the Wireless Network Resiliency Cooperative Framework have proven most effective in promoting resiliency because of the

[19] *See, e.g.*, AT&T Comments at 6-7; Comments of T-Mobile at 7; Electric Trade Associations Comments at 4.

[20] AEP and Southern Comments at 9-10.

[21] *Id.*

[22] Comments Of The FirstEnergy Electric Utilities, PS Docket No. 11-60, at 15 (filed Feb. 8, 2019) (FirstEnergy Comments)

flexibility they afford to wireless providers.[23] As demonstrated in recent hurricane seasons, this flexibility has enabled providers to design, deploy, and manage wireless networks in ways that help to maintain service continuity and expedite restoration during and in the aftermath of disasters and emergencies.[24] As T-Mobile notes, "flexibility is key in building solid networks," given that investments to promote resiliency will vary based on a number of factors, including geography.[25] Similarly, Verizon observes that wireless providers "need flexibility to design their networks based on the disaster risks in a potential areas."[26]

There is no "one-size-fits all" solution to resiliency, and there should be no one-size-fits-all mandates.[27] T-Mobile states that investments in networks in areas subject to hurricanes often will differ from investments in networks more prone to earthquakes. Similarly, the Competitive Carriers Association states "[a]dopting one-size-fits-all rules for disaster recovery efforts that are inherently unique and fluid risks imposing unnecessary requirements on providers that may ultimately divert critical resources."[28]

To that end, the Commission should dismiss overly simplistic calls for backup power standards.[29] CTIA has previously documented the challenges involved in supplying backup

[23] *See, e.g.*, CTIA Comments at 5; CCA Comments at 2; T-Mobile Comments at 4.

[24] *See, e.g.*, CTIA Comments at 4-5.

[25] T-Mobile Comments at 3.

[26] Verizon Comments at 2.

[27] *See, e.g.*, CTIA Comments at 8; T-Mobile Comments at 3; CCA Comments at 5; Comments of Verizon, PS Docket No. 11-60, at 12 (filed Feb. 18, 2014).

[28] CCA Comments at 5.

[29] *See, e.g.*, Comments of the California Public Utilities Commission, PS Docket No. 11-60, at 7 (filed Feb. 4, 2019); Electric Trade Associations Comments at 15.

power to all cell sites.[30] Moreover, as Verizon accurately notes, wireless providers already "respond[] comprehensively to the loss of electrical power through on-site and deployable back-up power resources."[31] Particularly as wireless providers deploy additional small cells in their networks, cells on wheels (COWs) or cells on light trucks (COLTs) may be more viable solutions for power in the event of an electricity outage than a back-up power source.[32] The Commission should continue to advance wireless providers' abilities to implement innovative solutions that take into consideration the unique aspects of each disaster and each individual network. Policies promoting resiliency are best served by ensuring carriers retain the flexibility to make judgments about what solutions make the most sense given the needs of diverse network configurations.

V. THE COMMISSION'S EFFORTS TO MODERNIZE ITS INFRASTRUCTURE SITING POLICIES WILL IMPROVE NETWORK RESILIENCY.

In contrast to the constructive recommendations of many commenters on ways to improve network resiliency, a few electric utilities attempt to use this proceeding to object to the Commission's efforts to promote wireless and broadband deployment. This criticism is meritless.[33] As CTIA has noted, the Commission's actions over the past decade – and notably, in the last year – to ease regulatory impediments to wireless deployment have increased network densification and greater network capacity, decreased costs for consumers, and increased service

[30] Reply Comments of CTIA, PS Docket Nos. 11-60, 13-239 (filed Feb. 18, 2014); Reply Comments of CTIA, PS Docket Nos. 11-60, 12-1153 (filed Sept. 4, 2012).

[31] Reply Comments of Verizon, PS Docket No. 17-344, at 2 (Feb. 21, 2018). *See also* Comments of CTIA, PS Docket No. 17-344, at 4-6 (Feb. 21, 2018); Comments of T-Mobile, PS Docket No. 17-344, at 11 (Feb. 21, 2018).

[32] For example, CTIA explained that zoning regulations that ban back-up power for small cells will create outages that are out of the carriers' control. In such instances, a COW or COLT is a better solution than a back-up power source. Comments of CTIA, PS Docket Nos. 11-60, 13-239 (filed Jan. 17, 2014).

[33] *See* AEP and Southern Comments at 14-17; FirstEnergy Comments at 4-5.

speeds. These stronger wireless networks are more resilient, enabling faster service restoration when outages inevitably occur.[34] These efforts have been made possible by the Commission's actions to modernize its siting policies to promote wireless deployment.

Attacks by these utilities on the Commission's pole attachment rules ignore that the wireless industry prioritizes safety and reliability in network deployment, and that the Commission has thoroughly evaluated and responded to utilities' concerns when developing pole attachment rules, finding that such rules do not harm the reliability of electric power.[35] Access to poles is essential to strengthening wireless networks and, in turn, restoring service to the public – service that consumers and businesses increasingly depend upon. The actions the Commission has taken to modernize its siting policies will serve to promote wireless and broadband deployment, including by accelerating the attachment process and reducing the costs of attaching new facilities, while ensuring worker and public safety and protecting the reliability of existing communications and electric infrastructure.

In any event, this is not the proper proceeding for these commenters to contest the Commission's pole attachment or other infrastructure siting rules. It will not advance the Commission's laudable objective to enhance reliability and would instead undermine the Commission's efforts to facilitate wireless and broadband deployment.

The Commission should not be distracted by these collateral attacks on the pole attachment and infrastructure siting rules. It should instead focus on the many positive proposals that other commenters have made in the record. CTIA looks forward to working with the

[34] *See, e.g.*, Comments of CTIA, PS Docket No. 17-344, at 20-21 (filed Jan. 22, 2018); Reply Comments of CTIA, PS Docket No. 17-344, at 13-14 (filed Feb. 21, 2018).

[35] *See, e.g.*, *Accelerating Wireline Broadband Deployment by Removing Barriers to Infrastructure Investment*, Third Report and Order and Declaratory Ruling, 33 FCC Rcd 7705 ¶¶ 19-20, 131-33 (2018).

Commission to turn many of those proposals into reality and thus to strengthen the resiliency of both electric power and communications networks.

VI. CONCLUSION.

The challenges identified in the aftermath of recent storms and the record in this proceeding confirm wide support for enhancing cooperative efforts, both at the local level and through the BDAC and DHS, to improve coordination between power companies and communications providers. CTIA looks forward to continuing to engage with stakeholders through forums such as the BDAC to continue to advance practices that will further enhance coordination between communications providers and power companies in the aftermath of emergencies and disasters.

Respectfully submitted,

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